

FIG. 2

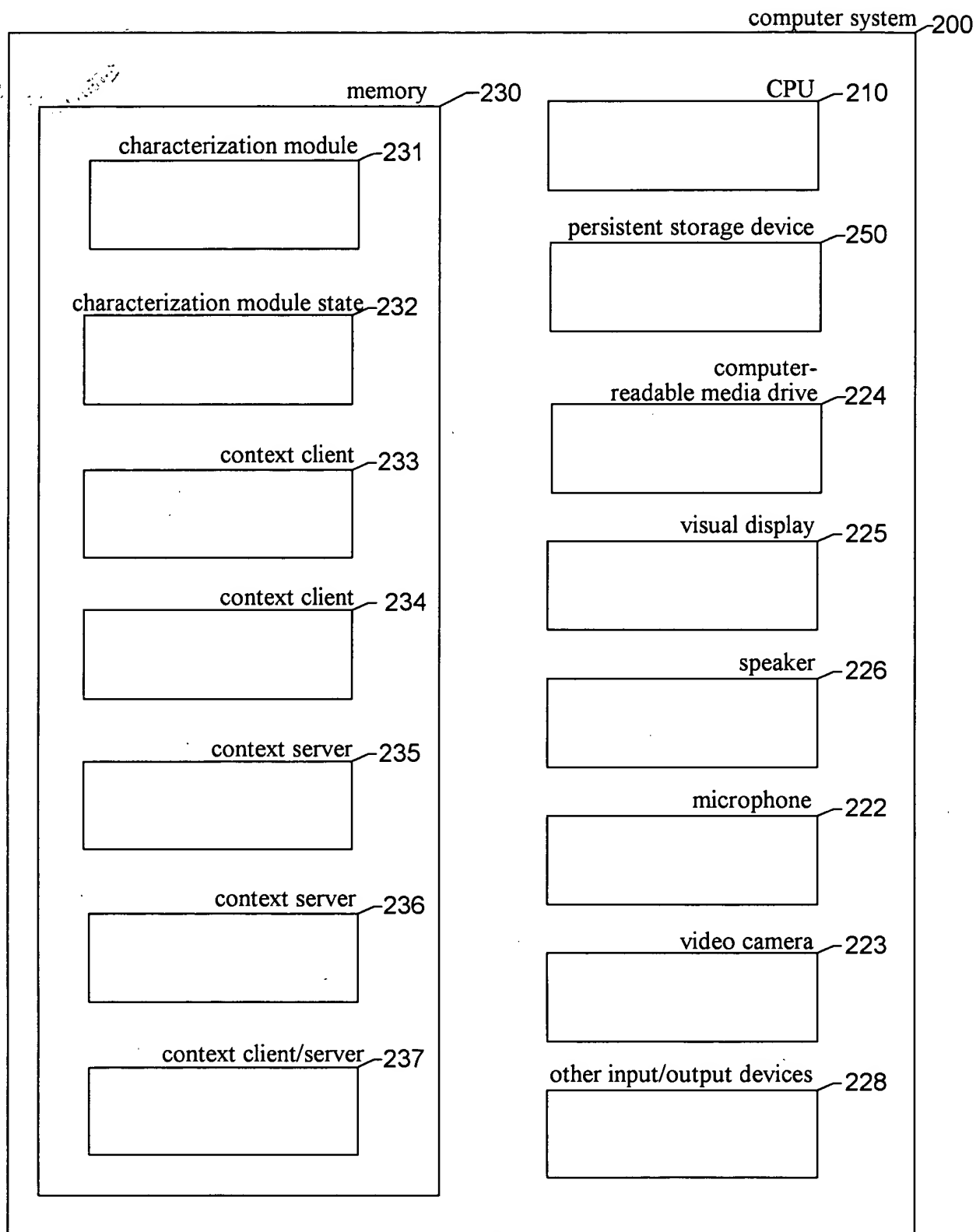


Fig. 2

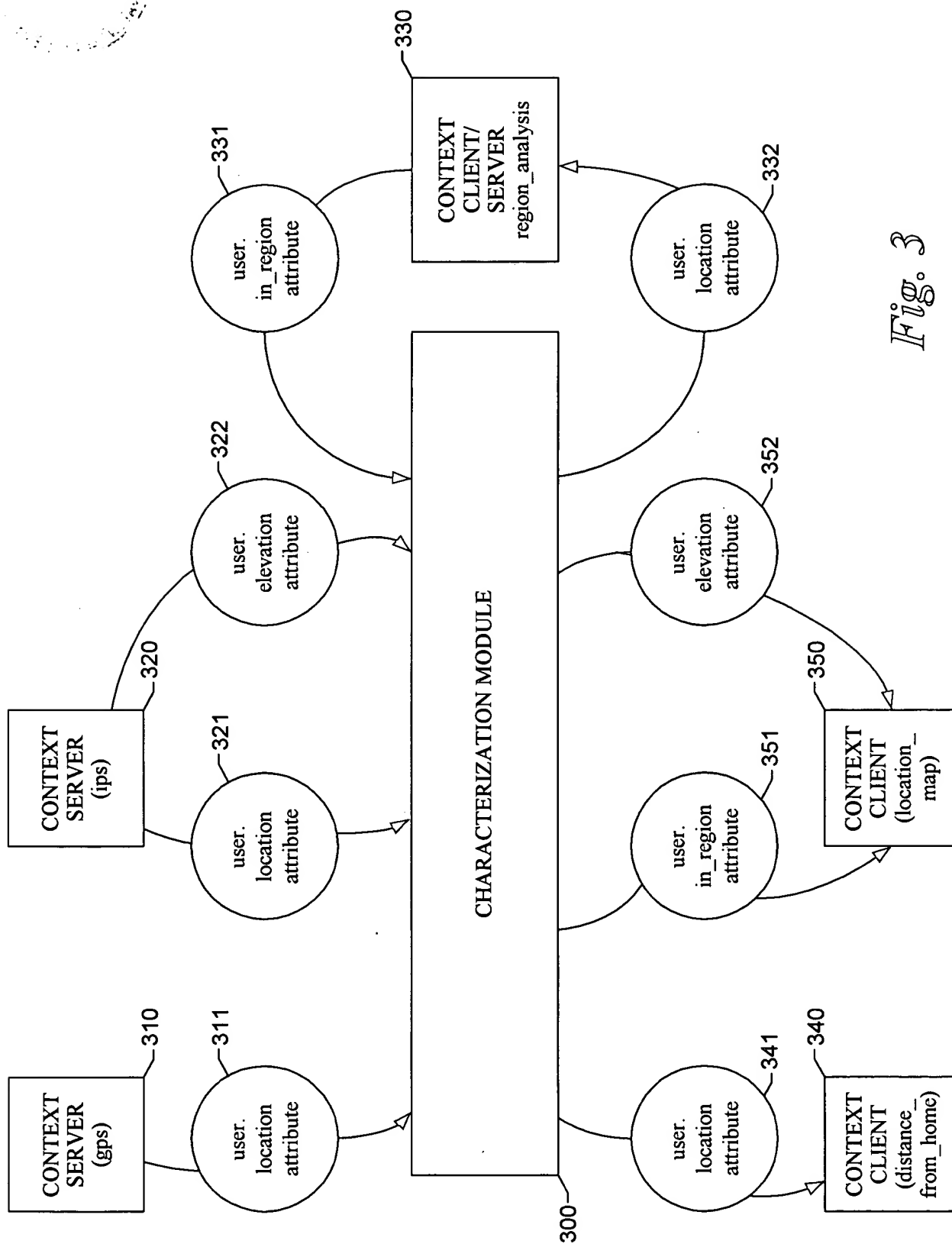


Fig. 3

context server table 400				
context server name	version	installation date	filename	request handler
401 gps	1	2/10/2000	gps.exe	(reference)
402 ips	1	2/21/2000	ips.exe	(reference)
403 location_region_analysis	1	2/10/2000	l_r_a.exe	(reference)

Fig. 4

attribute instance table						
attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
501 user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
502 user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
503 user.elevation	ips	22	.5	13:11:01.118 2/22/2000	meters	1
504 user.in_region	location_region_analysis	none	none	none	none	0

Fig. 5

600	context client name	message handler	context client table
601	location_map	(reference)	
602	distance_from_home	(reference)	
603	region_analysis	(reference)	

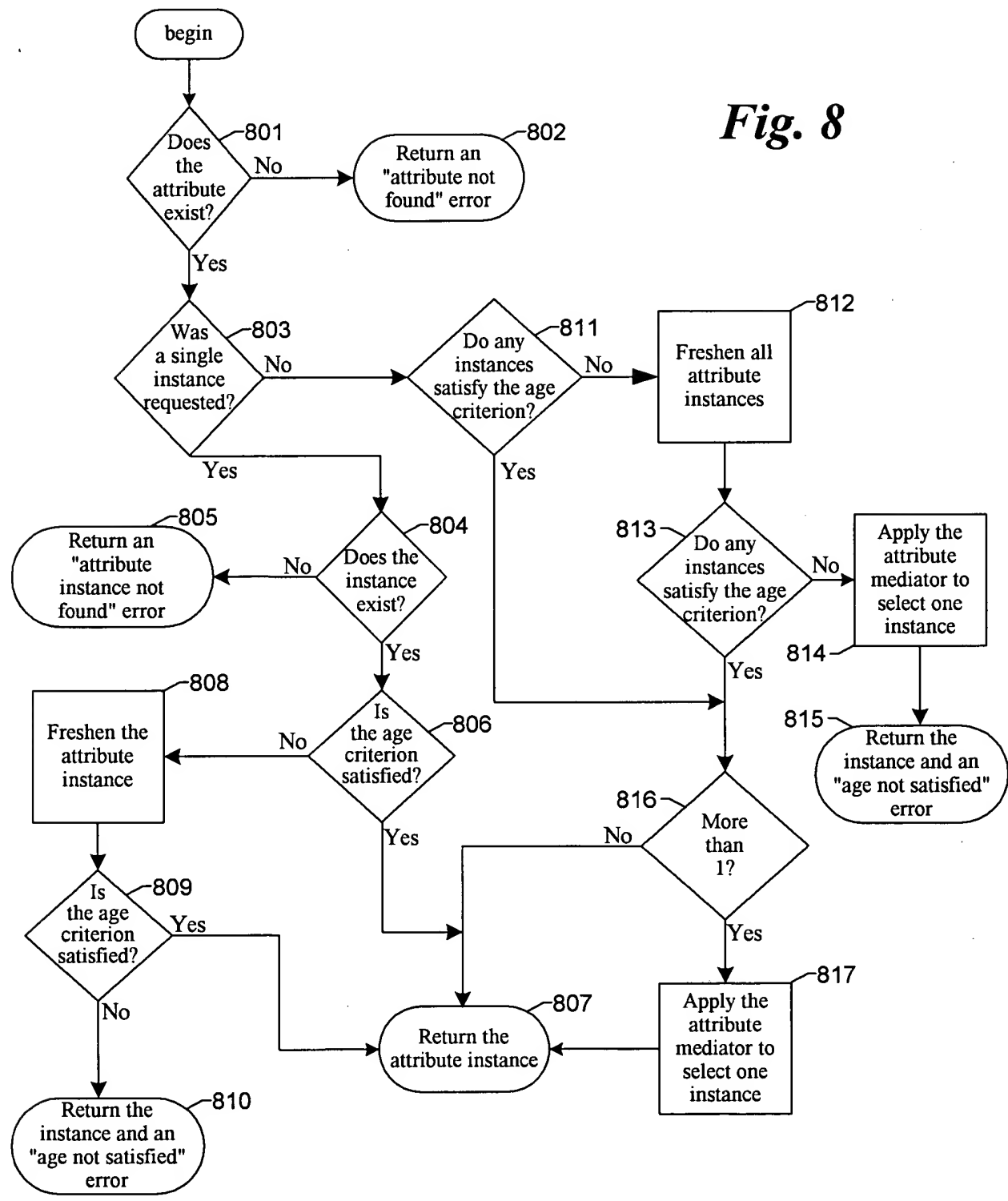
Fig. 6

700	attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
701	user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
702	user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
703	user.elevation	ips	22	.5	13:11:01.118 2/22/2000	meters	1
704	user.in_region	location_region_analysis	none	none	none	none	1

Fig. 7

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Fig. 8



900	attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
901	user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
902	user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
903	user.elevation	ips	22.25	.5	13:11:06.565 2/22/2000	meters	1
904	user.in_region	region_analysis	none	none	none	none	1
		912	913	914	915	916	917

Fig. 9

1000	condition name	context client name	first logical parameter	second logical parameter	comparison value	logical operator
1001	in_region_true	region_analysis	user.in_region	none	TRUE	=
	1011	1012	1013	1014	1015	1016

Fig. 10

1100	condition monitor name	context client name	condition name	behavior	frequency	condition last evaluated	trigger handler reference	stopped
1101	region_boundary_ crossed	region_analysis	in_region_true	TRUE or FALSE	30	13:11:29.101 2/22/2000	(reference)	no

Fig. 11

1200	condition monitor name	context client name	condition name	behavior	frequency	condition last evaluated	trigger handler reference	stopped
1201	region_boundary_ crossed	region_analysis	in_region_true	TRUE or FALSE	30	13:11:59.101 2/22/2000	(reference)	yes

Fig. 12

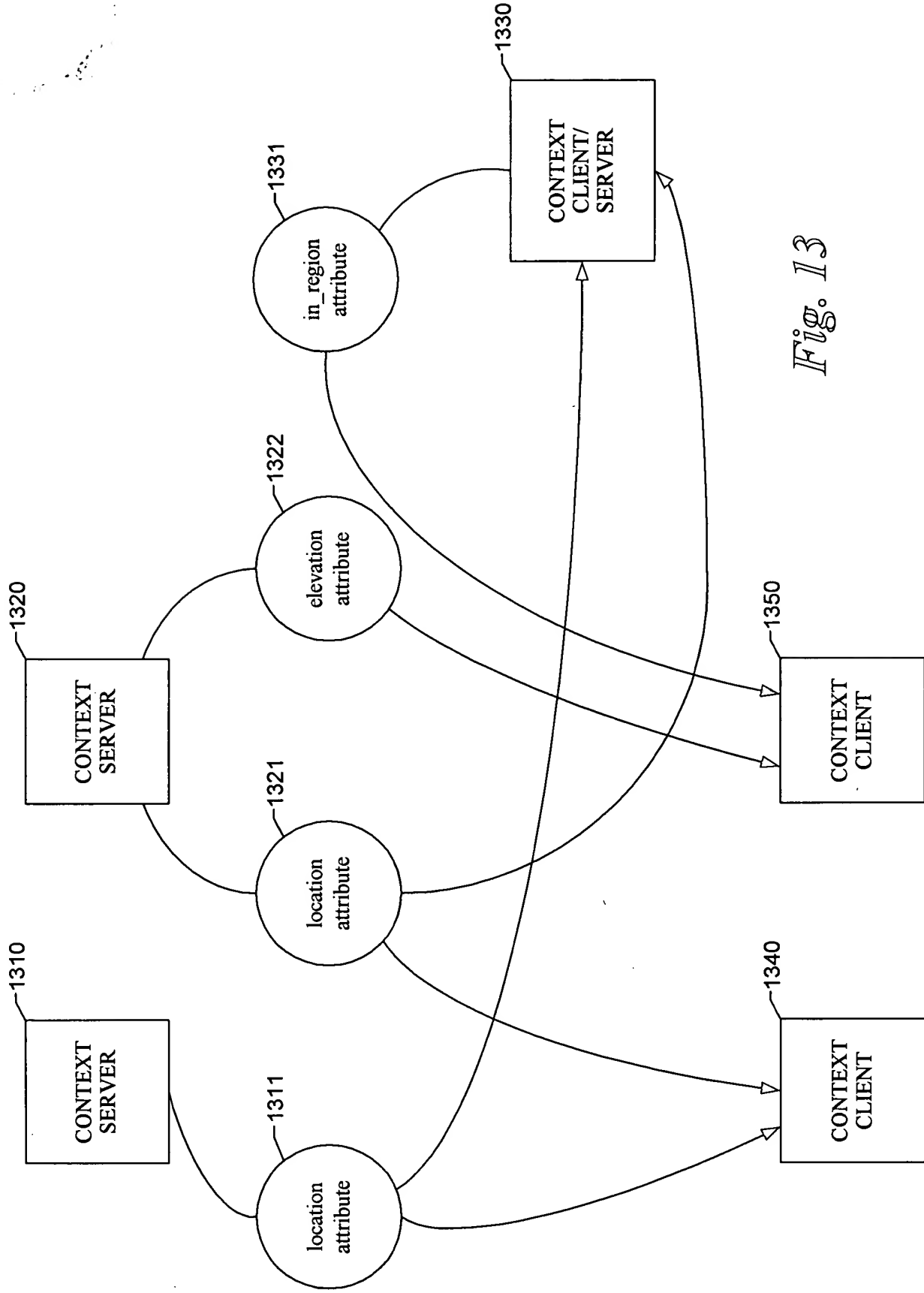


Fig. 13

User.

Desired_privacy_level
 Interruptibility
 Speed
 Direction
 Acceleration
 Availability.
 Cognitive_availability
 Tactile_availability
 Manual_availability
 Visual_availability
 Oral_availability
 Auditory_availability
 Proximity.<Item or place name>
 Mood.
 Happiness
 Sadness
 Anger
 Frustration
 Confusion
 Activity.
 Driving
 Eating
 Running
 Sleeping
 Talking
 Typing
 Walking
 Location.
 Place_name
 Latitude
 Longitude
 Altitude
 Room
 Floor
 Building
 Address
 Street
 City
 County
 State
 Country
 Postal_Code
 Destination. (same as User.Location.)
 Physiology.
 Pulse
 Body_temperature
 Blood_pressure
 Respiration

Person.<name or ID>. (same as User.)

Platform.**UI.**

Oral_input_device_availability
 Manual_input_device_availability
 Tactile_output_device_availability
 Visual_output_device_availability
 Auditory_output_device_availability

Platform. (continued)**CPU.**

Load
 Speed

Memory.

Total_capacity
 Used

Storage.

Total_capacity
 Used

Connectivity.

Connection_status
 Connection_speed
 Connection_type/device
 Connection_activity

Power.

Power_source
 Power_level

Environment.**People.**

Nearest
 Number_present
 Number_close

Local.

Time
 Date
 Temperature
 Pressure
 Wind_speed
 Wind_direction
 Absolute_humidity
 High_forecast_temperature
 Low_forecast_temperature
 People_present
 Ambient_noise_level
 Ambient_light_level
 Days.<previous or future>.
 High_temperature
 Low_temperature
 Precipitation_type
 Precipitation_amount

Place.<place name>. (same as Environment.Local)

Application.**Mail.**

Available
 New_messages_waiting
 Messages_waiting_to_be_sent

Phone.

Available
 In_use
 On/off
 Notification_mechanism
 Call_incoming
 Caller_ID

Sound_recorder.

Available
 Recording

Fig. 15

1) User Setting

a) Mental Context

i) Meaning

ii) Cognition

(1) Divided User Attention

(2) Task Switching

(3) Background Awareness

iii) Solitude

iv) Privacy

(1) Desired Privacy

(2) Perceived Privacy

v) Social Context

vi) Affect

b) Physical Situation

i) Body

(1) Biometrics

(2) Posture

(3) Motion

(4) Physical Encumbrment

(a) Senses

(i) Eyes

(ii) Ears

(iii) Tactile

(iv) Hands

(v) Nose

(vi) Tongue

(b) Workload demands/effects

(c) Interaction with computer devices

(d) Interaction with people

(e) Physical Health

ii) Environment

(1) Time/Space

(2) Objects

(3) Persons

(a) Audience/Privacy Availability

(i) Scope of Disclosure

(ii) Hardware affinity for privacy

(iii) Privacy Indicator for User

(iv) Privacy Indicator for Public

(v) Watching Indicator

(vi) Being Observed Indicator

(4) Ambient Interference

(a) Visual

(b) Audio

(c) Tactile

2) Computer

a) Power

b) Configuration

i) User Input Systems

(1) Hand/Haptic

(a) Keyboard/Keystrokes

(2) Voice/Audio

(3) Eye Tracking

(4) Cursors

(a) Axis

(b) Resolution

(i) Selection

(ii) Invocation

(c) Accelerators

ii) Output Systems

(1) Visual

(a) Resolution

(2) Audio

(a) Public/Private

(3) Haptic

iii) External Resources

(1) I/O devices

(2) Connectivity

c) Data

i) Quantity/State

ii) Urgency/Importance

(1) Use of Prominence

iii) Modality

iv) Sensitivity/Purpose

(1) Privacy Issues

(2) Use of Association

(3) Use of Safety

v) Source/Ownership

(1) Types

(a) User generated

(b) Other computers or people

(c) Sensor

(d) PC State

(2) Use of Association

Fig. 16

Fig. 17

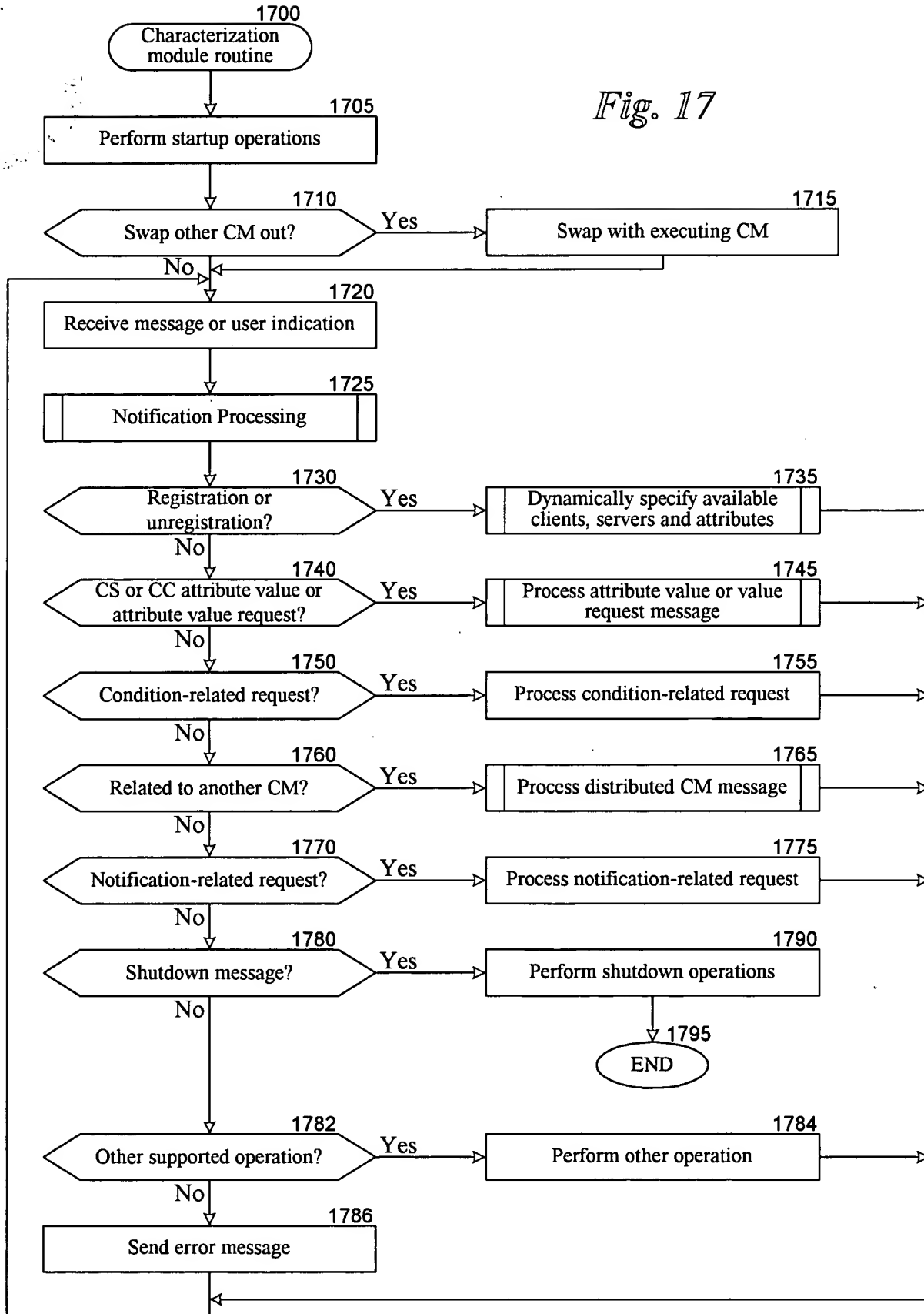


FIG. 17

Fig. 18

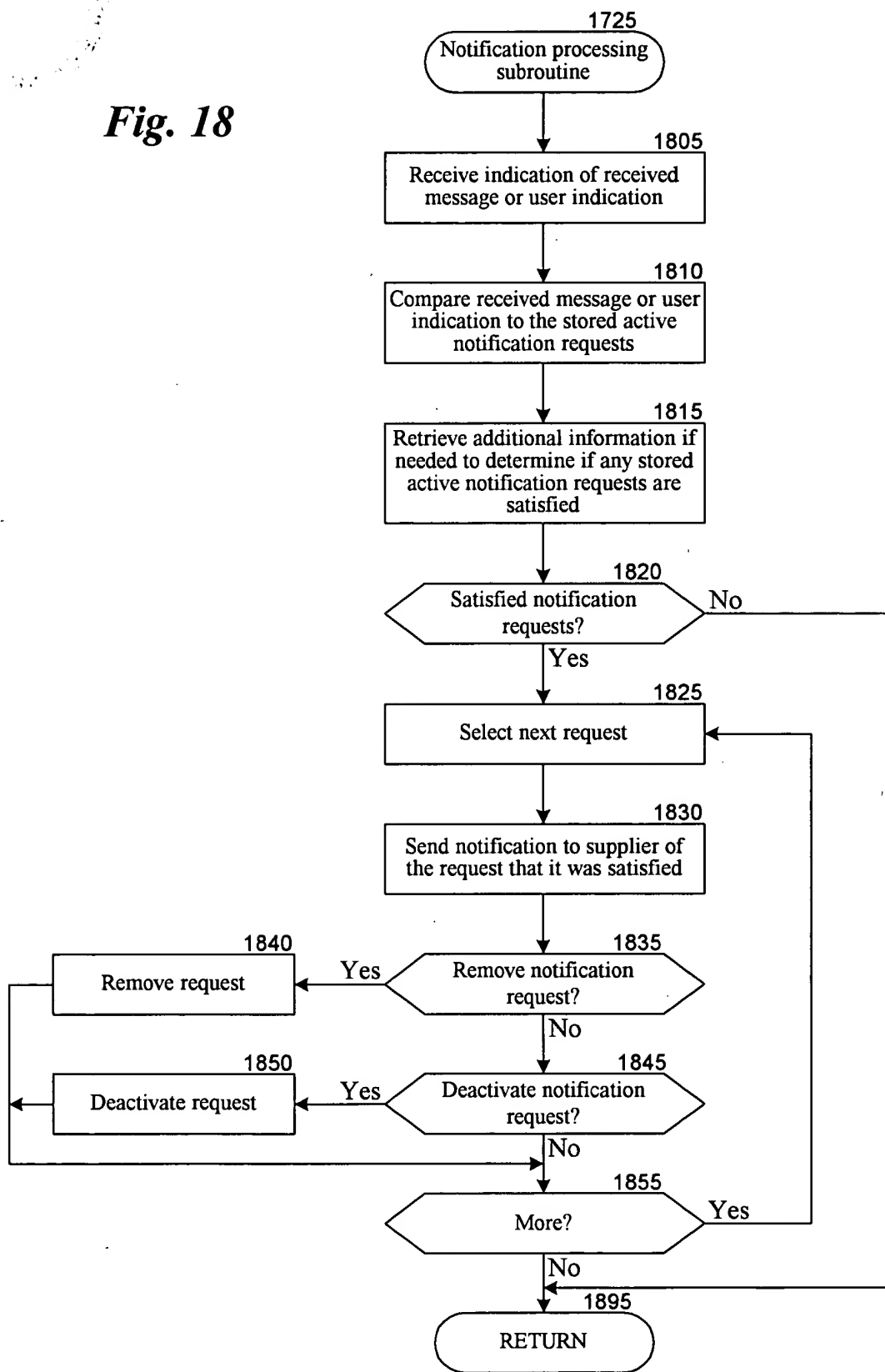


FIG. 18

Fig. 19

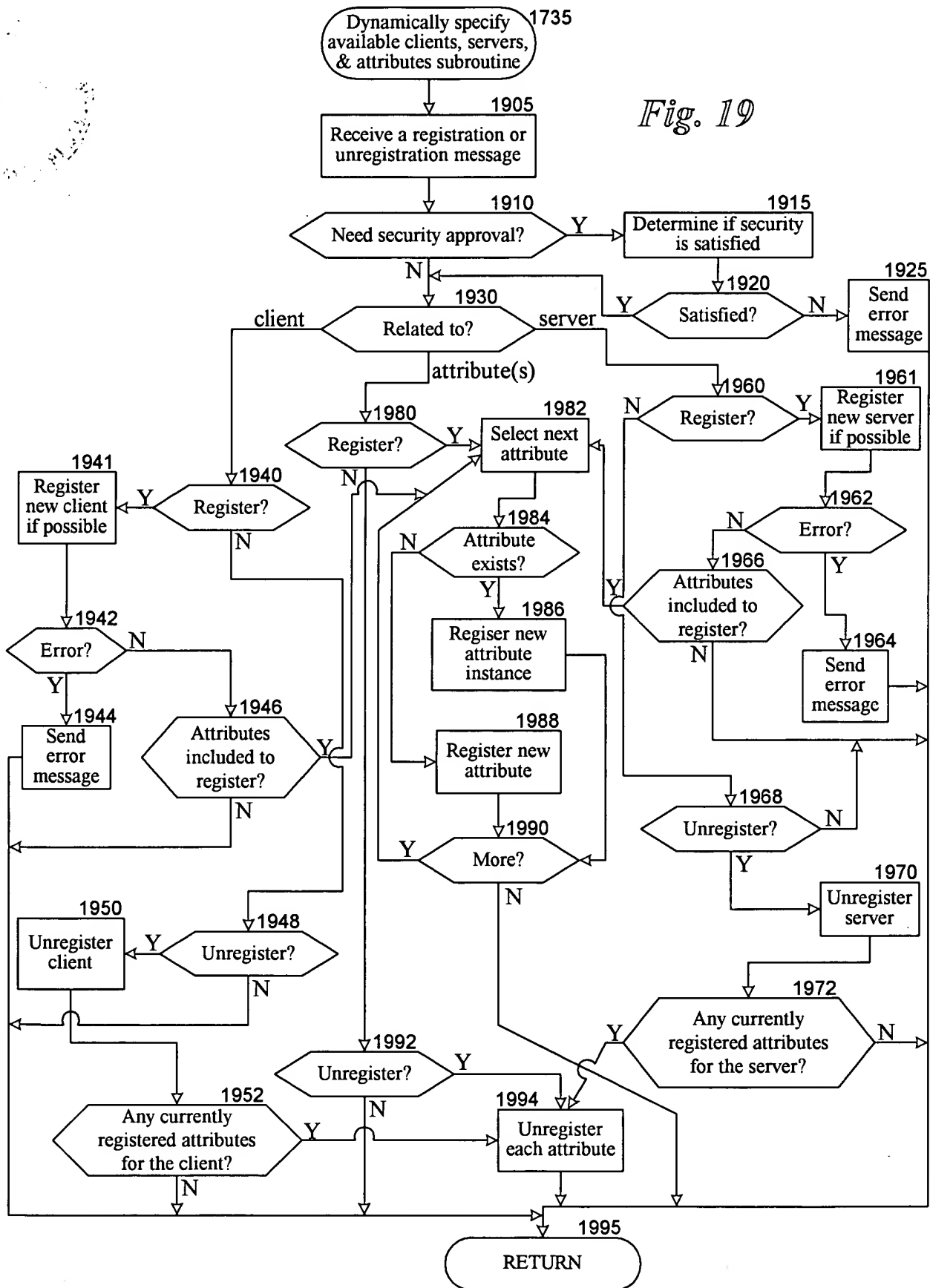
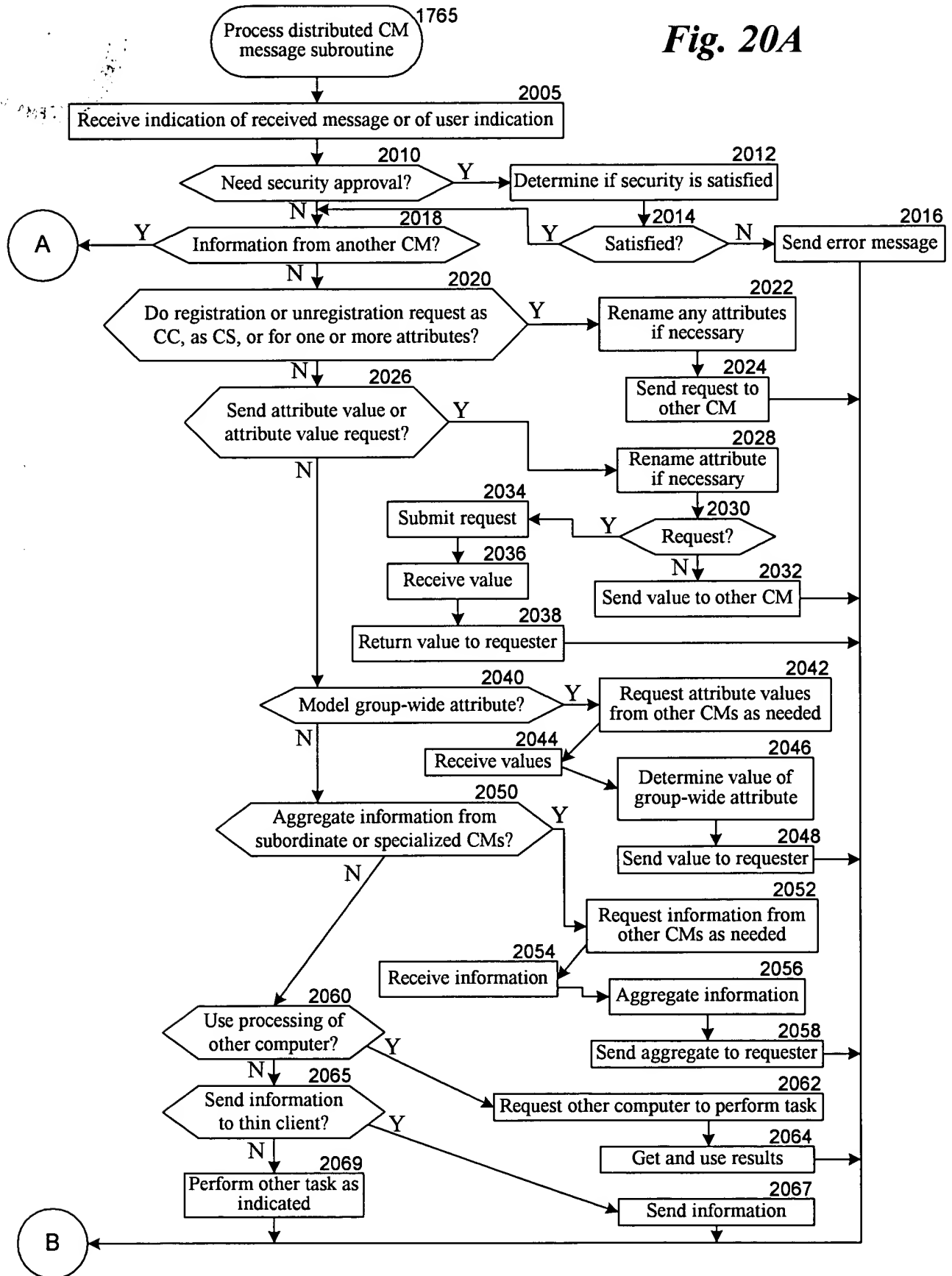


Fig. 20A



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Fig. 20B

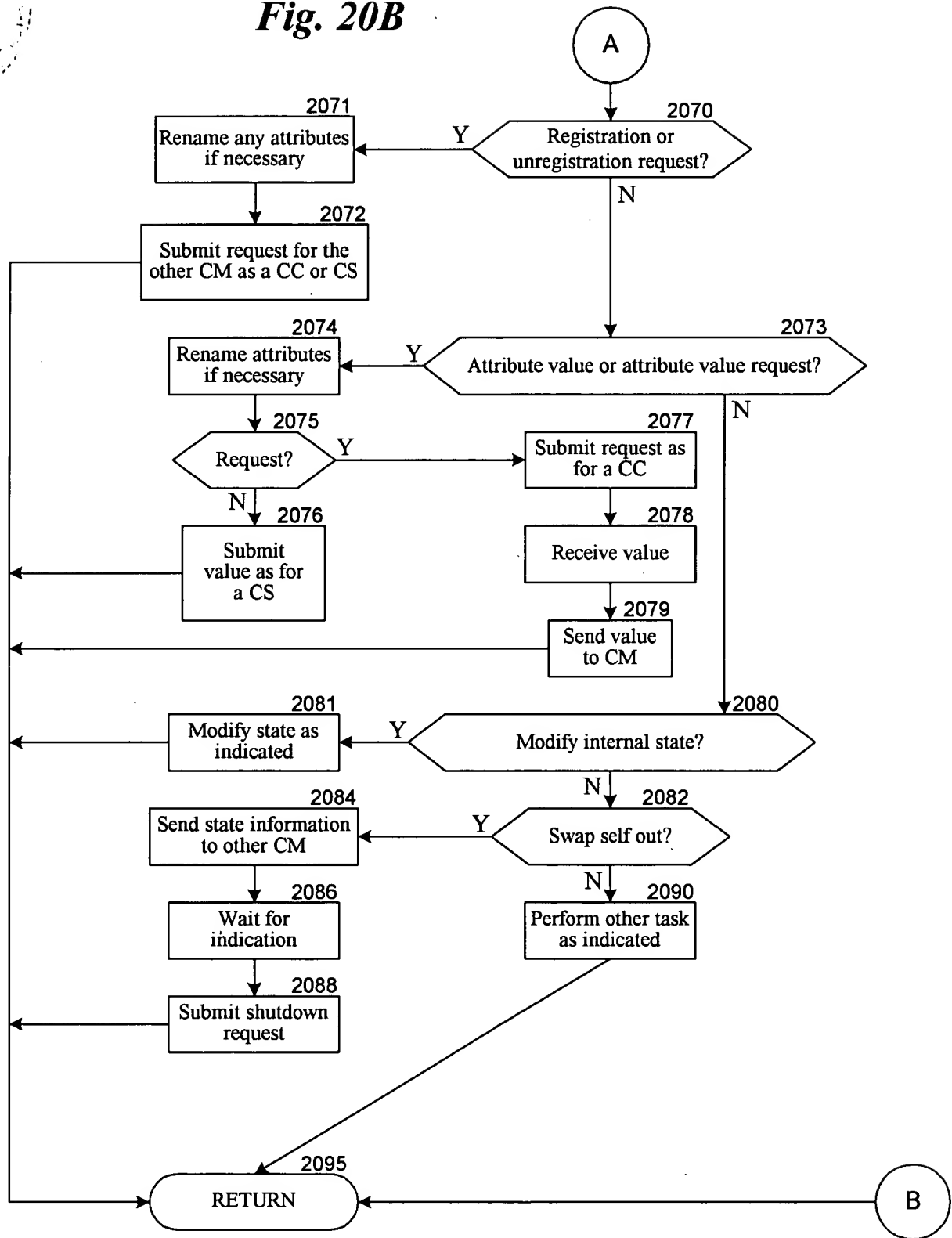


FIG. 20B

Fig. 21

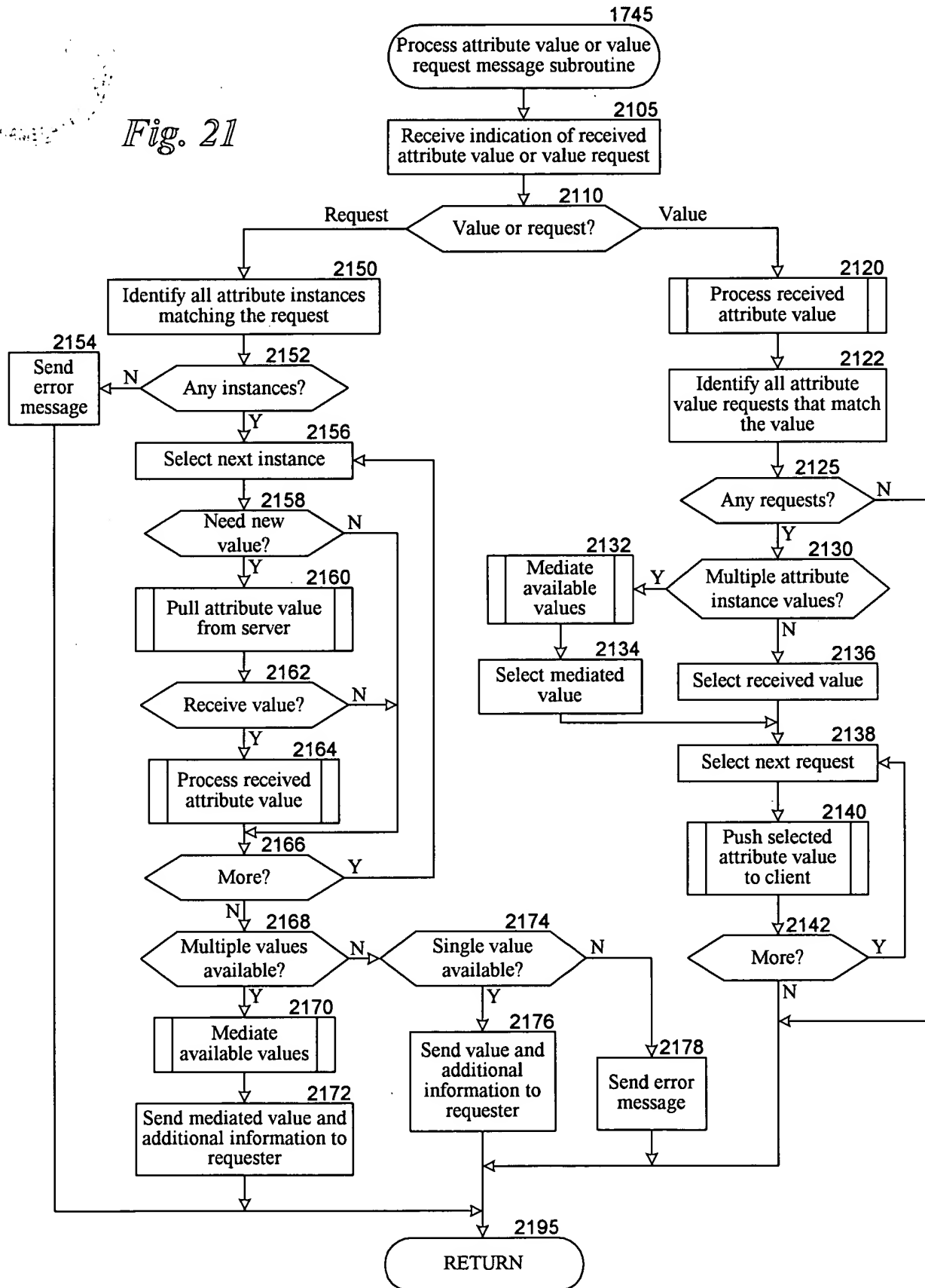
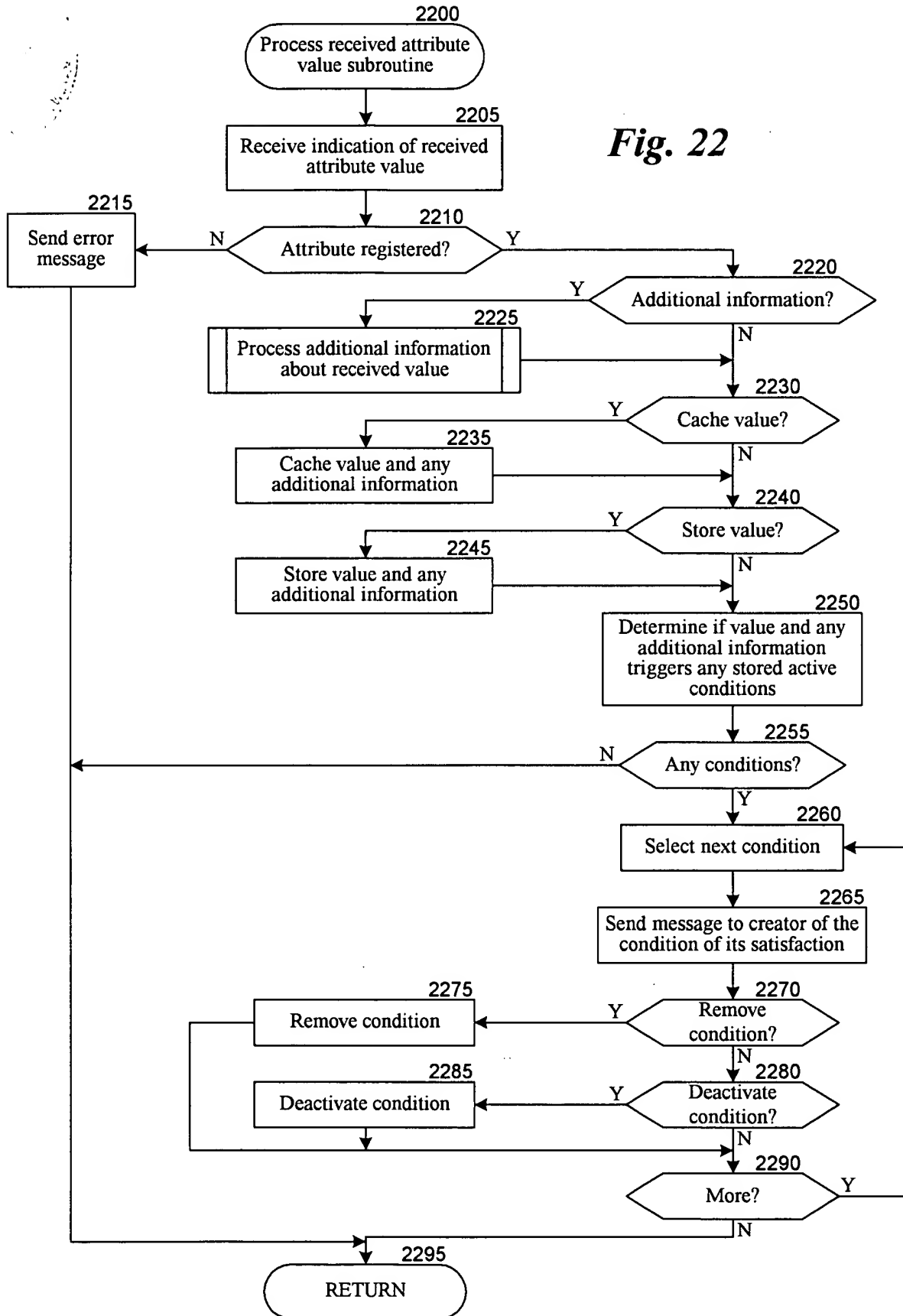
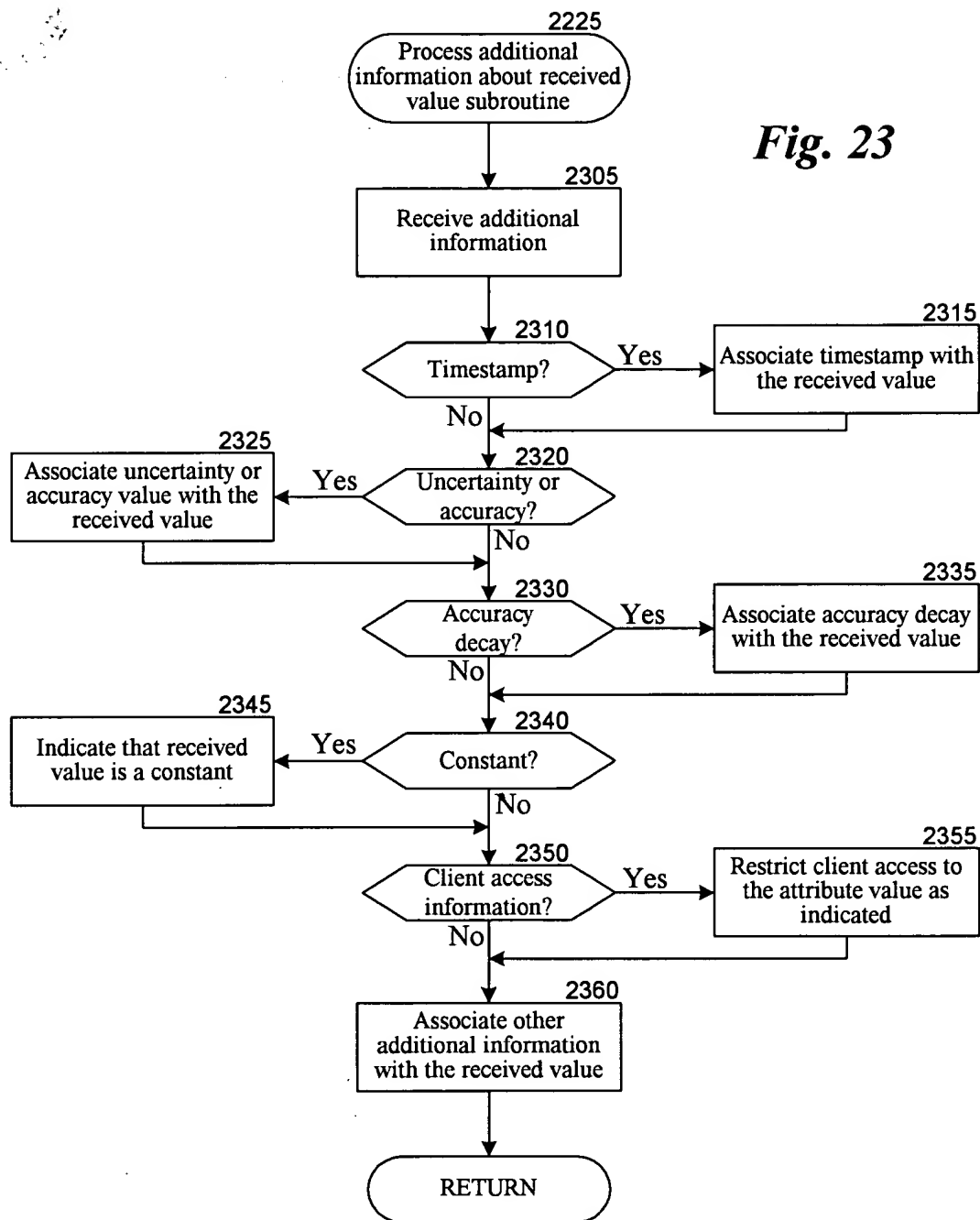


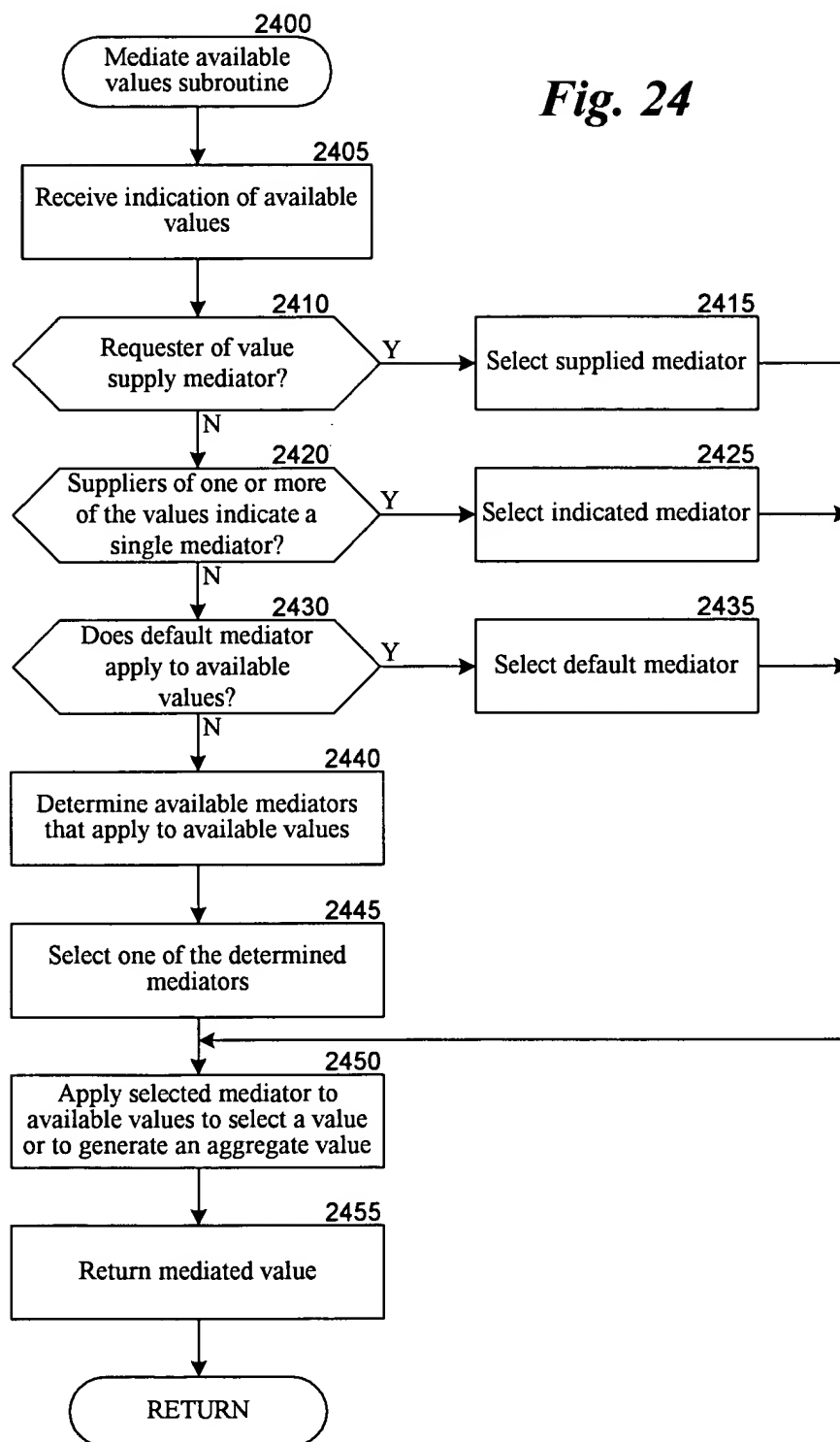
Fig. 22



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Fig. 23





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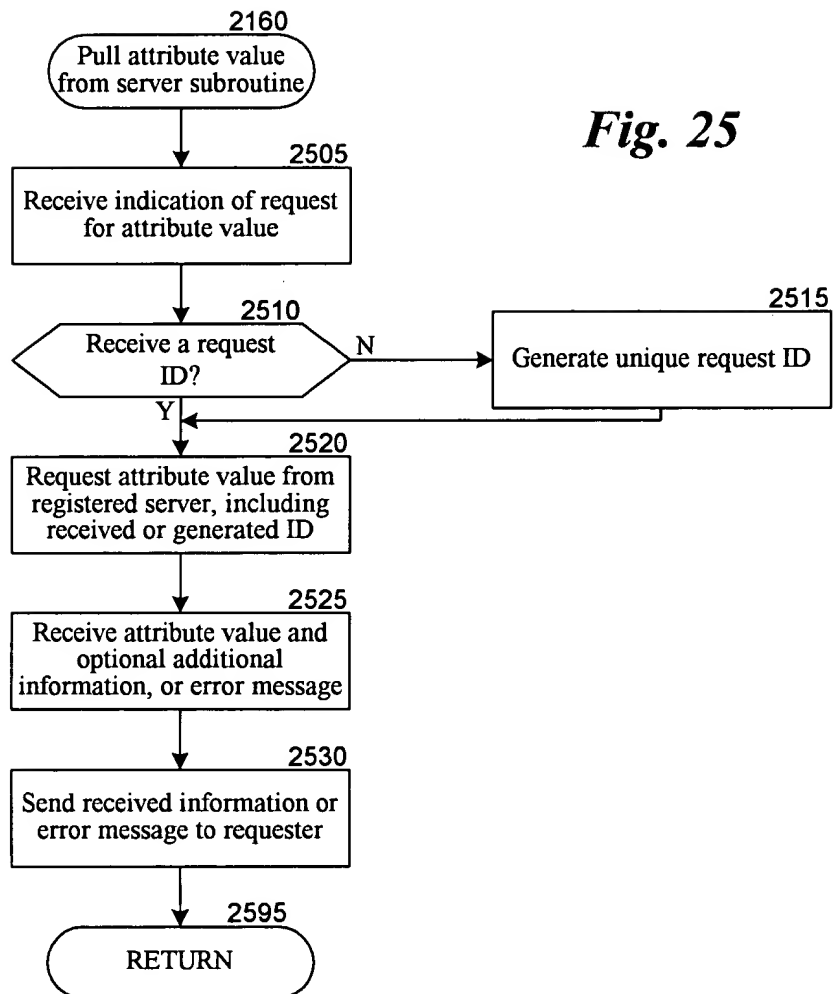


Fig. 25

FIG. 26

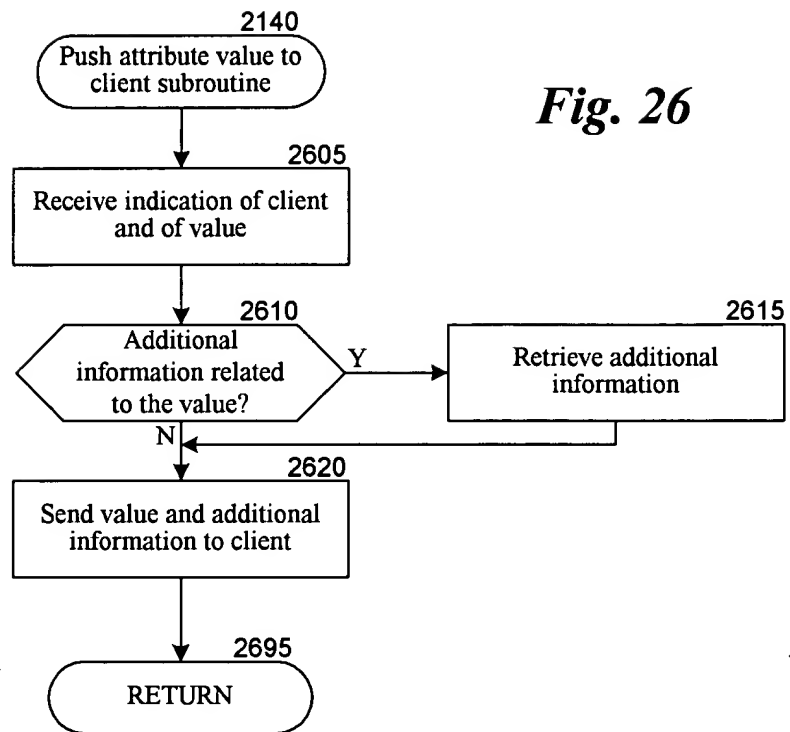


Fig. 26

Fig. 27

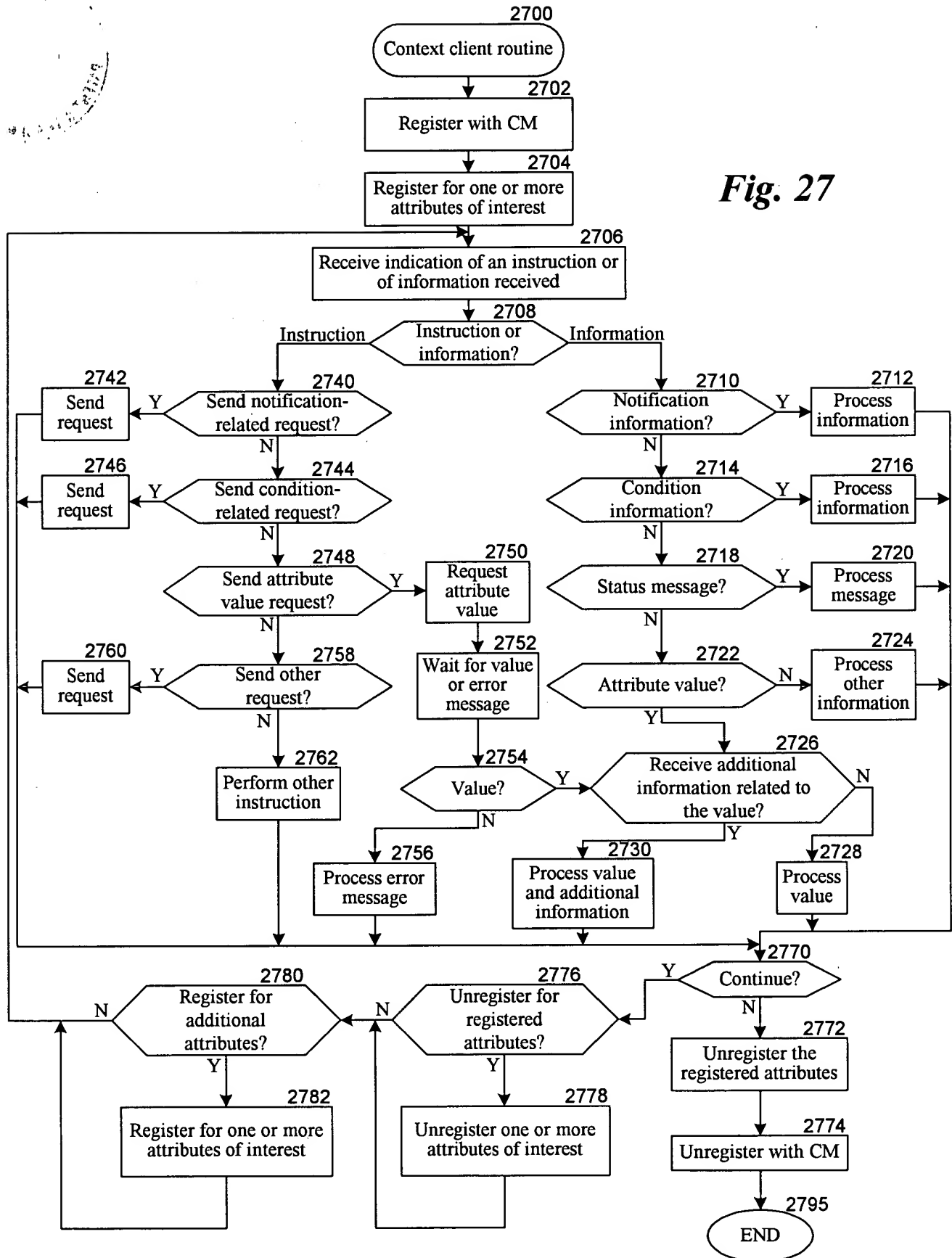


Fig. 28

